

Appl. No. 10/735,946
Response dated August 6, 2007
Reply to Office Action of 2/6/2007

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-14 (cancelled).

Claim 15 (previously presented): The apparatus of claim 29, further comprising:

a sheave rotateably configured on the drill mast;
a motor coupled with the sheave; and
an impact hammer, the impact hammer is configured to be raised by a flexible cord,
wherein the flexible cord is directed by the drill mast and is received onto the sheave, such
that the impact hammer is raised thereby.

Claim 16 (original): The apparatus of claim 15, further comprising:

a sample tube, wherein the sample tube resides within the drill bit while the drill bit is
turning, such that the hole is bored with the sample tube contained within the drill bit.

Claim 17 (original): The apparatus of claim 16, further comprising:

a core sample, the core sample can be collected once the drill bit reaches a depth
by dropping the impact hammer on a sample tube extension member.

Claim 18 (previously presented): The apparatus of claim 29, further comprising:

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a sample tube, wherein the sample tube resides within the drill bit while the drill bit is turning, such that the hole is bored with the sample tube contained within the drill bit.

Claim 19 (previously presented): The apparatus of claim 29, wherein the drill mast is configured to rotate about one axis relative to the ATV.

Claim 20 (previously presented): The apparatus of claim 29, wherein the drill mast is configured to rotate about two axes relative to the ATV.

Claim 21 (previously presented): The apparatus of claim 29, wherein the drill mast is configured to articulate in a ball and socket.

Claims 22-28 (cancelled).

Claim 29 (currently amended): An apparatus comprising:

- an all terrain vehicle (ATV);
- a power takeoff configured to deliver power from an ATV engine;
- a drill mast removably coupled to the ATV;
- a drill motor configured to turn a drill bit, the drill motor slidably disposed on the drill mast, the drill motor is configured to be powered from the power takeoff;
- a control configured to operate the drill motor such that a hole can be drilled by the drill bit; and

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a drill mast stand, the drill mast stand is configured to receive the drill mast when the drill mast is removed from the ATV to facilitate drilling while the drill motor is powered from the power takeoff.

Claim 30 (previously presented): The apparatus of claim 29, further comprising:

a hydraulic pump, the hydraulic pump is configured to be operated by the power takeoff and the drill motor is a hydraulic motor, the hydraulic motor is configured to receive hydraulic fluid from the hydraulic pump.

Claim 31 (previously presented): The apparatus of claim 29, wherein a type of drilling is rock coring.

Claim 32 (previously presented): The apparatus of claim 29, wherein the control is a manual control.

Claim 33 (previously presented): The apparatus of claim 29, wherein the control utilizes a wireless link to provide control of the drill motor using a remote control device.

Claim 34 (original): The apparatus of claim 33, wherein the remote control device controls a position of the drill motor on the drill mast.

Claim 35 (original): The apparatus of claim 33, wherein the remote control device controls a speed of rotation of the drill bit.

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Claim 36 (cancelled).

Claim 37 (previously presented): The apparatus of claim 29, wherein a type of drilling is solid stem auger drilling.

Claim 38 (previously presented): The apparatus of claim 29, wherein a type of drilling is hollow stem auger drilling.

Claims 39-41 (cancelled).

Claim 42 (previously presented): The apparatus of claim 29, wherein the drill mast is configured to rotate about one axis relative to the drill mast stand.

Claim 43 (previously presented): The apparatus of claim 29, wherein the drill mast is configured to rotate about two axes relative to the drill mast stand.